

Pacific Sun lamps' firmware update instruction & manual.

Caution: Switching off the power supply during updating process may damage your lamp. Recommended distance between the lamp and the computer that you are using to update your lamp is between 1-2 meters. If you are using laptop with bluetooth module build-in – please use external, USB bluetooth module for better signal strength. Its very important for upgrade process!

Choose the appropriate firmware, compatible with your lamp model. **Uploading wrong firmware may damage your lamp and void your warranty.** The damage may require returning the lamp to our service department to restore its original functionality.

To check if your lamp is compatible with our newest firmware, contact our customer service – info@pacific-sun.eu. Make sure that your computer's Bluetooth (built-in or external, USB) operates correctly and the connection between the computer and the lamp is not interrupted.

Firmware update process:

Download the application on the computer that you are going to use to update your lamp's firmware. If you already have the Pacific Sun software installed on your computer – uninstall it and download the newest version available on <http://www.Pacific-Sun.eu/download/software/publish.html>

If using Bluetooth protocol:

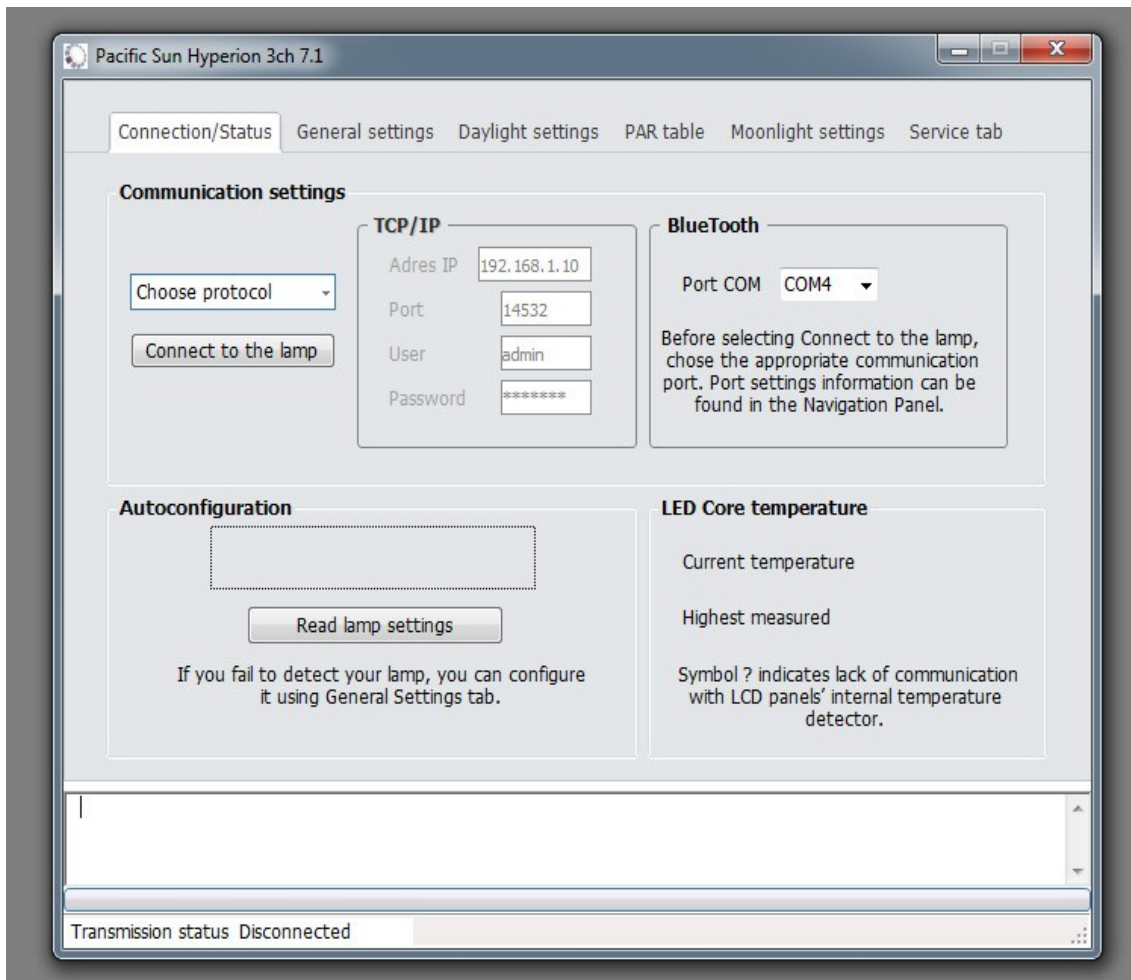
Check on which **COM** port your lamp is installed. You can check this via Navigation Panel (in Windows) – [Bluetooth Manager](#) – **COM** ports.

Before clicking Connect to the lamp – restart the lamp – by disconnecting its power supply for a few seconds. Switch on the lamp – select the appropriate **COM port** – and click **Connect to the lamp** button.

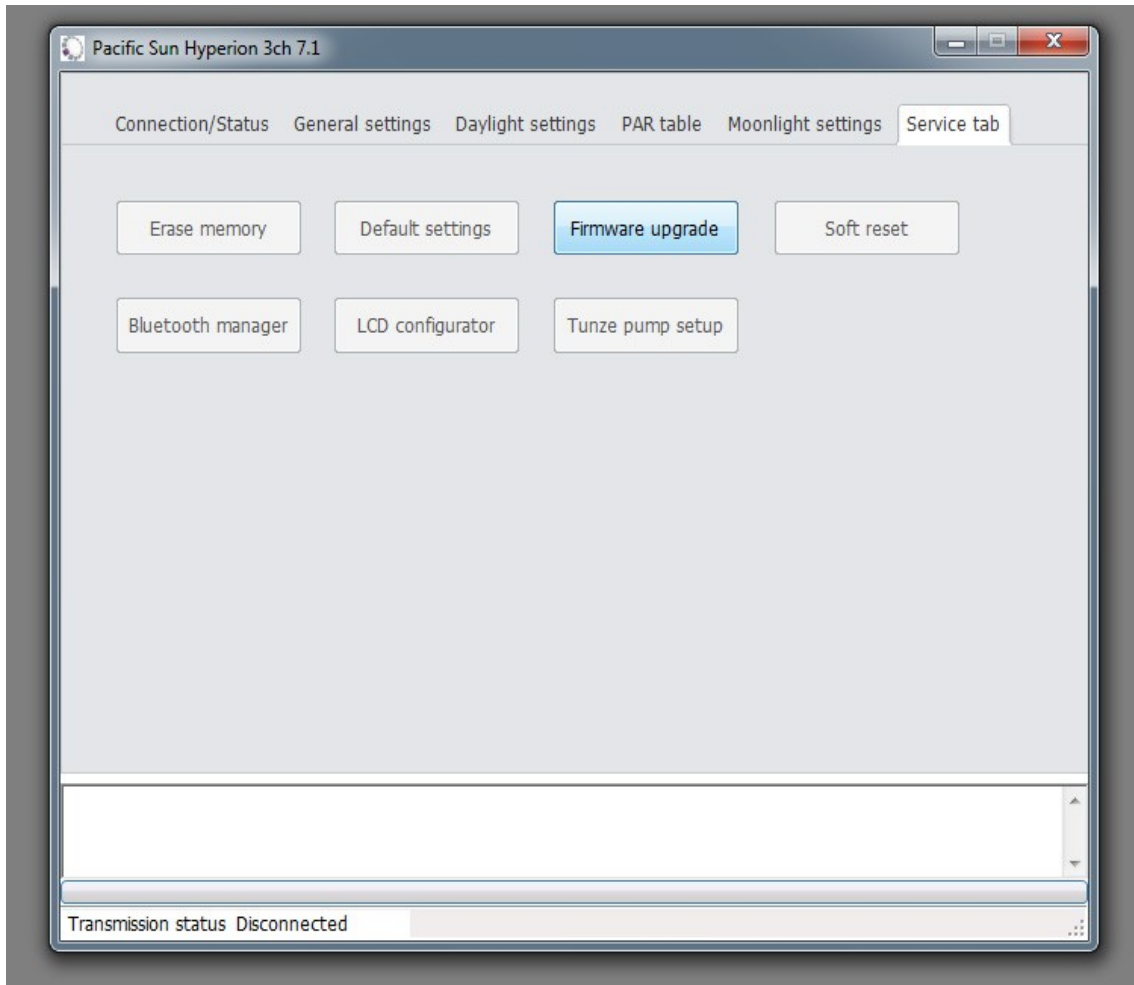
If using TCP/IP transmission:

Make sure you submitted the correct IP address, port, username and password. De-activate firewall ports on the computer you are using to update your lamp's firmware.

Click **Connect to the lamp** button.



Within a few seconds your computer should establish connection with your lamp (you will see „Transmission Status Connected”in the Status window.)



Update failure

If the CRC error occurs during transmission and the firmware will be not load properly - lamp will go to safe mode. On the screen there will be possible to see:

Memory Erased.

Upload firmware.

This means that the transmission process is not finished successfully.

To restore full functionality of the lamp you must perform the following steps:

- a) Reduce the distance between the lamp and the computer to an absolute minimum - or use an external BlueTooth module.
- b) restart the lamp by disconnecting it for a few seconds after the voltage
- c) re-run the application, select the correct COM port (do not press on Connect to the lamp!)
- d) go to the Service Tab - click Firmware upgrade - and then select the correct firmware for your lamp

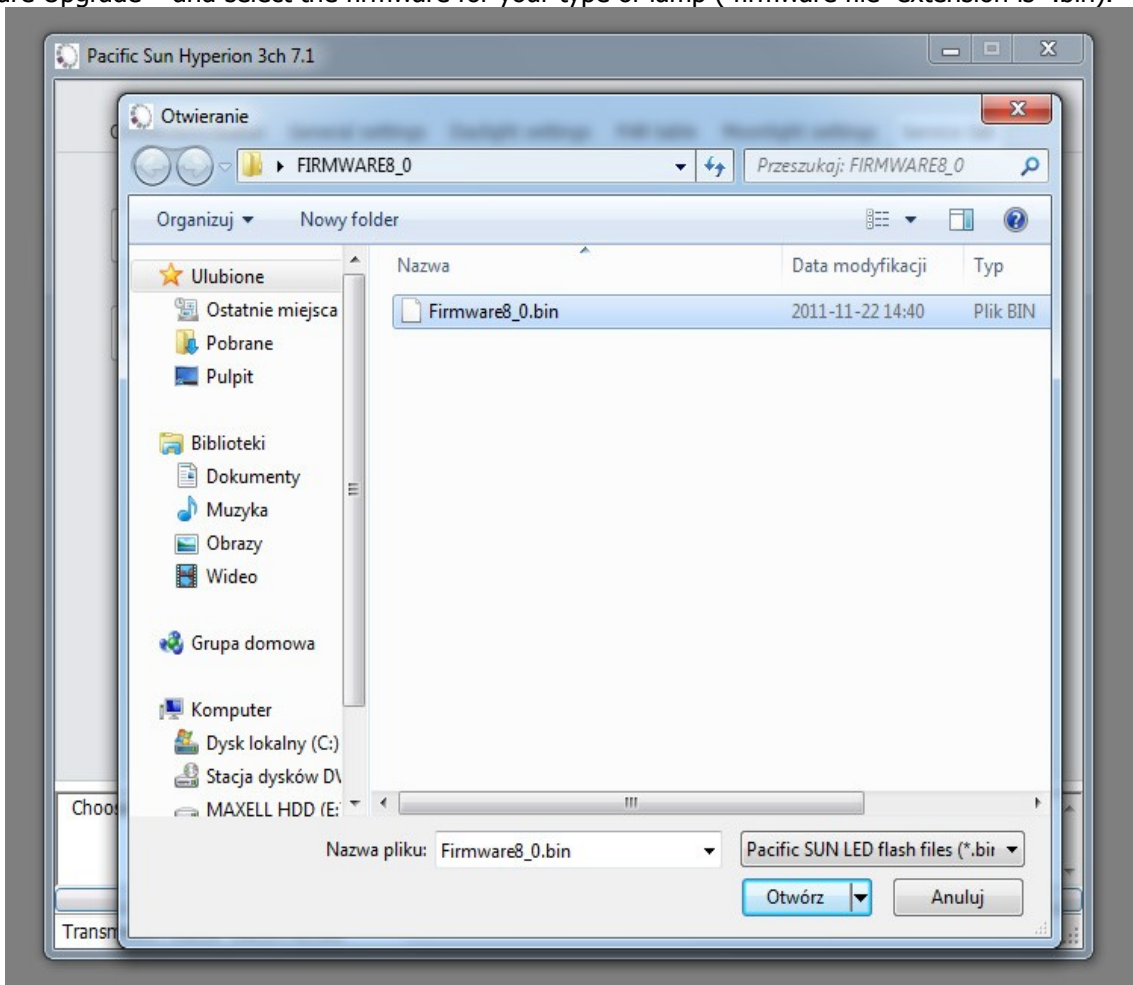
At this point, the firmware update process should start - the status bar will show the current progress update.

If you need additional information - please contact our service:

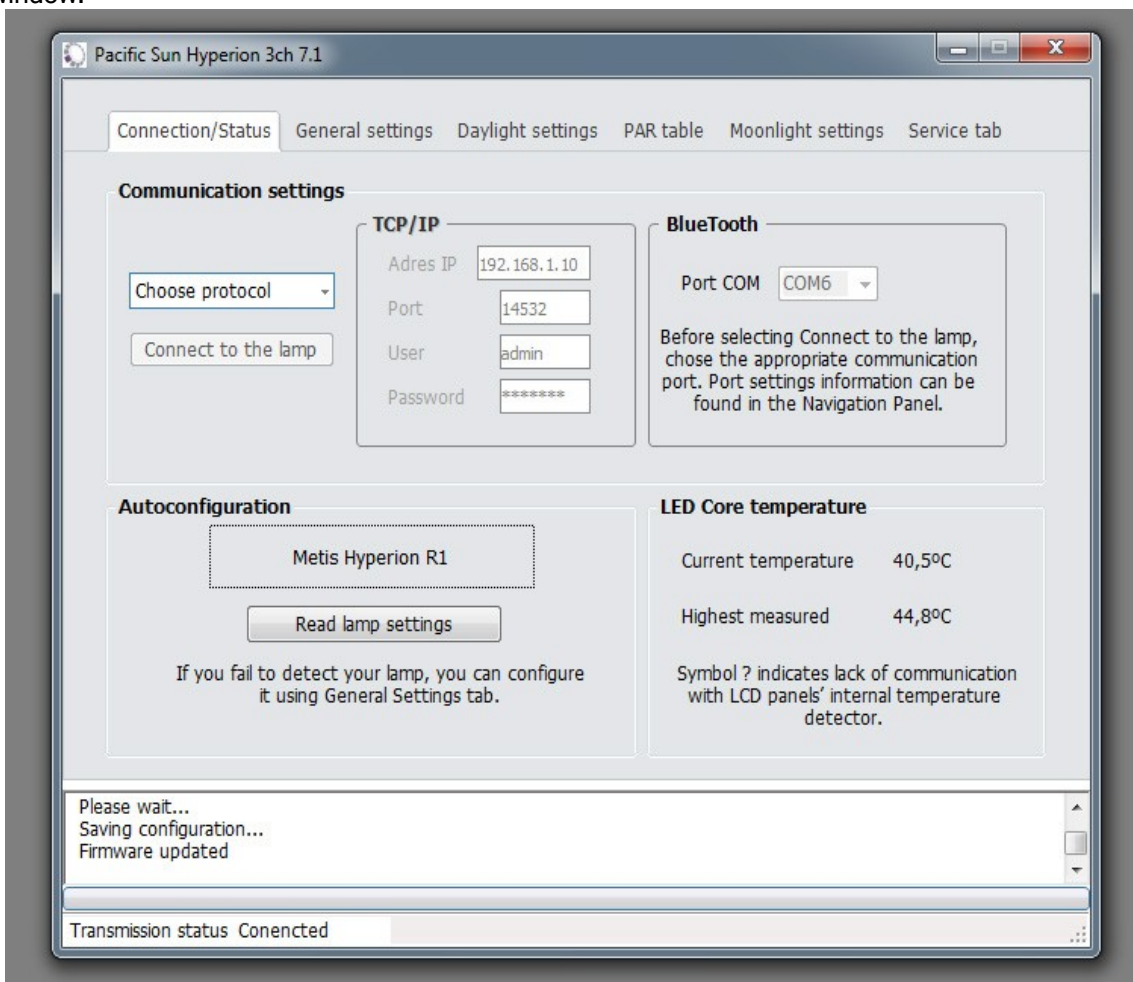
service@pacific-sun.eu

Next, select the **Service tab**

Click Firmware Upgrade – and select the firmware for your type of lamp (firmware file extension is .bin).



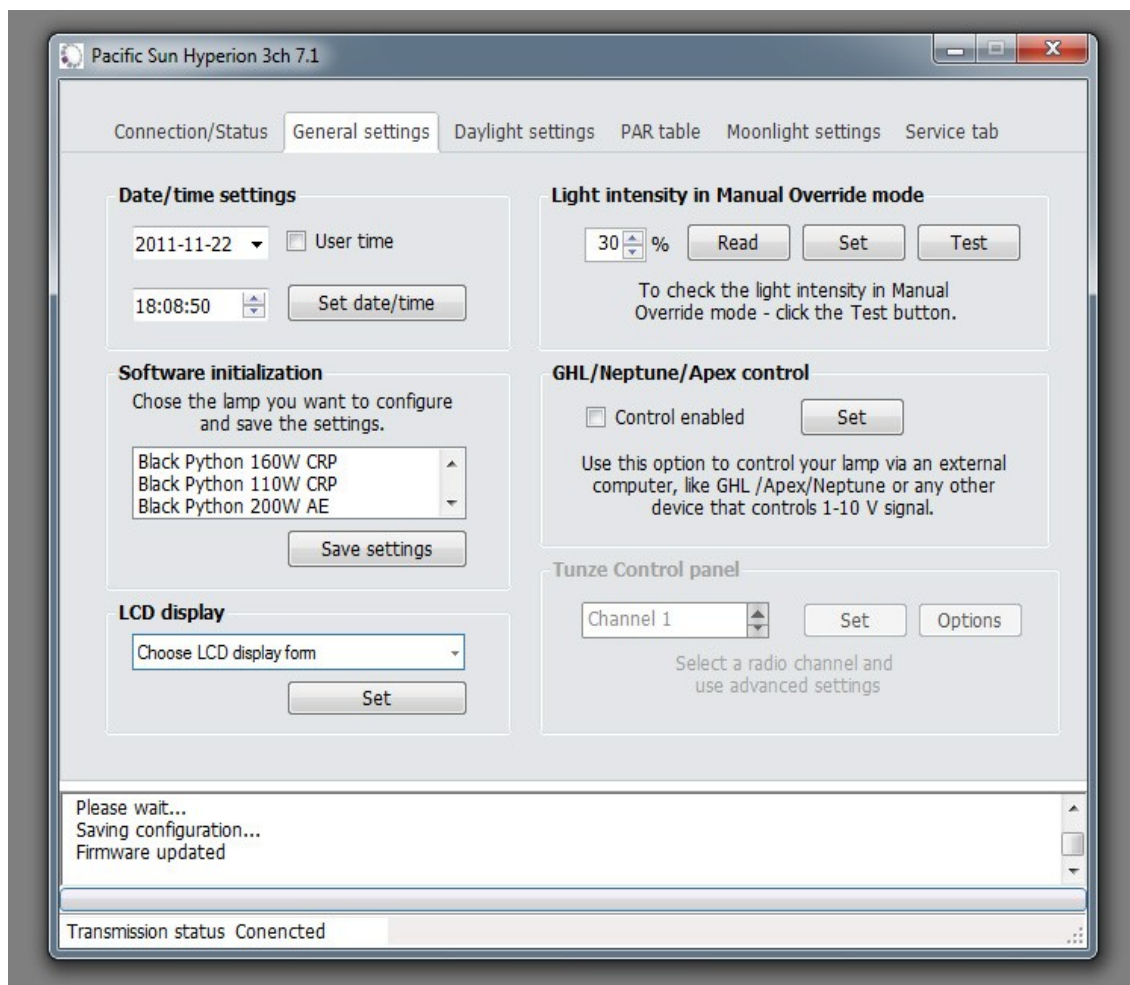
Your lamp's firmware is being updated. When the process is completed, you will see „Firmware updated” displayed in the status window.



1.1 Initial start

Before the first start-up or after firmware update, the lamp has to be configured. To check your lamp's configuration, click Read Lamp Settings in the Autoconfiguration box. If your lamp's model is not displayed in the Autoconfiguration box – you can configure it in General Settings tab.

General Settings



Set your local date and time in the **Date/time settings** fields.

Select your lamp model in the Software initialization field and confirm your selection clicking Save Settings button.

In **LCD display** field – you can choose how the information will be displayed on your lamp's LCD monitor – Basic Mode – used in the older firmware versions and Advanced Mode – displaying additional information.

Default LCD Screen(Basic Mode):



When lamp work on **Basic LCD mode** you will can see:

- actual time
- PAR table preriod(PAR#00)
- information about lighting scenarios/other lamp modes turned on- Season's simulation, T5 lights on(status), thunderstorms
- actual temperature
- first channel power(default – white group), second channel power(default – blue group)

In **Advanced LCD Mode** you will can see:



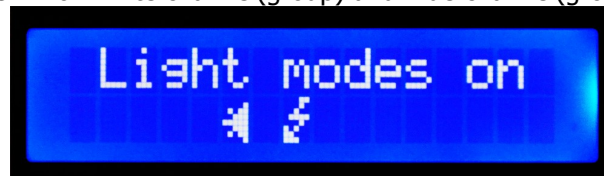
- actual time and lamp LED core temperature



- actual light colour temperature(CT)



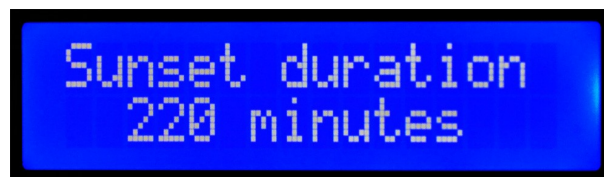
- actual LED channels power – for White channel(group) and Blue channel(group)



- this screen inform customer – which lighting scenarios are turned on



- time left to sunset start



- sunset duration(from sunset start – to moonlight mode)

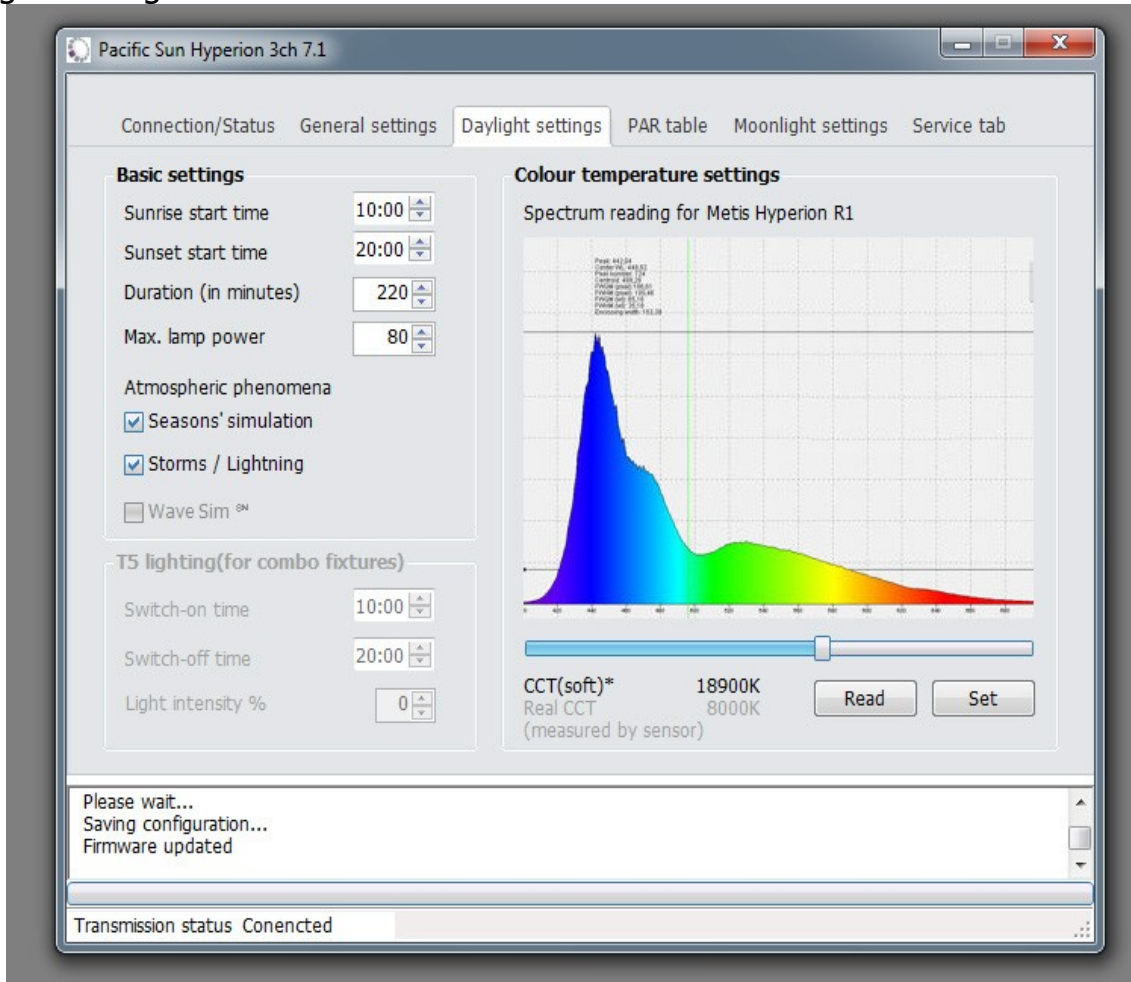
The various screens are changing periodically every 3 seconds.

Light Intensity in Manual Override mode – here you can check and select the intensity of light your lamp will emit while operating in the Manual Override mode.

GHL/Neptune/Apex control – if you set this option, your lamp switches to a passive mode, ready for external signals controlling the power of individual channels. The fans are controlled by an independent systems, and their speed depends on the current temperature of the LED panels (the fans do not work in the night cycle).

Tunze Control Panel – external Tunze pumps controller – you can coordinate the work of up to 4 Tunze pumps (with adjustable rotational speed) and control the pumps via your lamp’s built-in computer. This feature allows parallel simulation of tides, storms and variable circulation with other phenomena simulated by your lamp.

1.2 Daylight settings



Here you can configure basic settings for your lamp.

Sunrise start time – the beginning of sunrise simulation

Sunset start time – the beginning of sunset simulation

Duration – duration of sunrise/sunset

Max. lamp power – maximum power (between the end of sunrise simulation and the beginning of sunset simulation)

Atmospheric phenomena

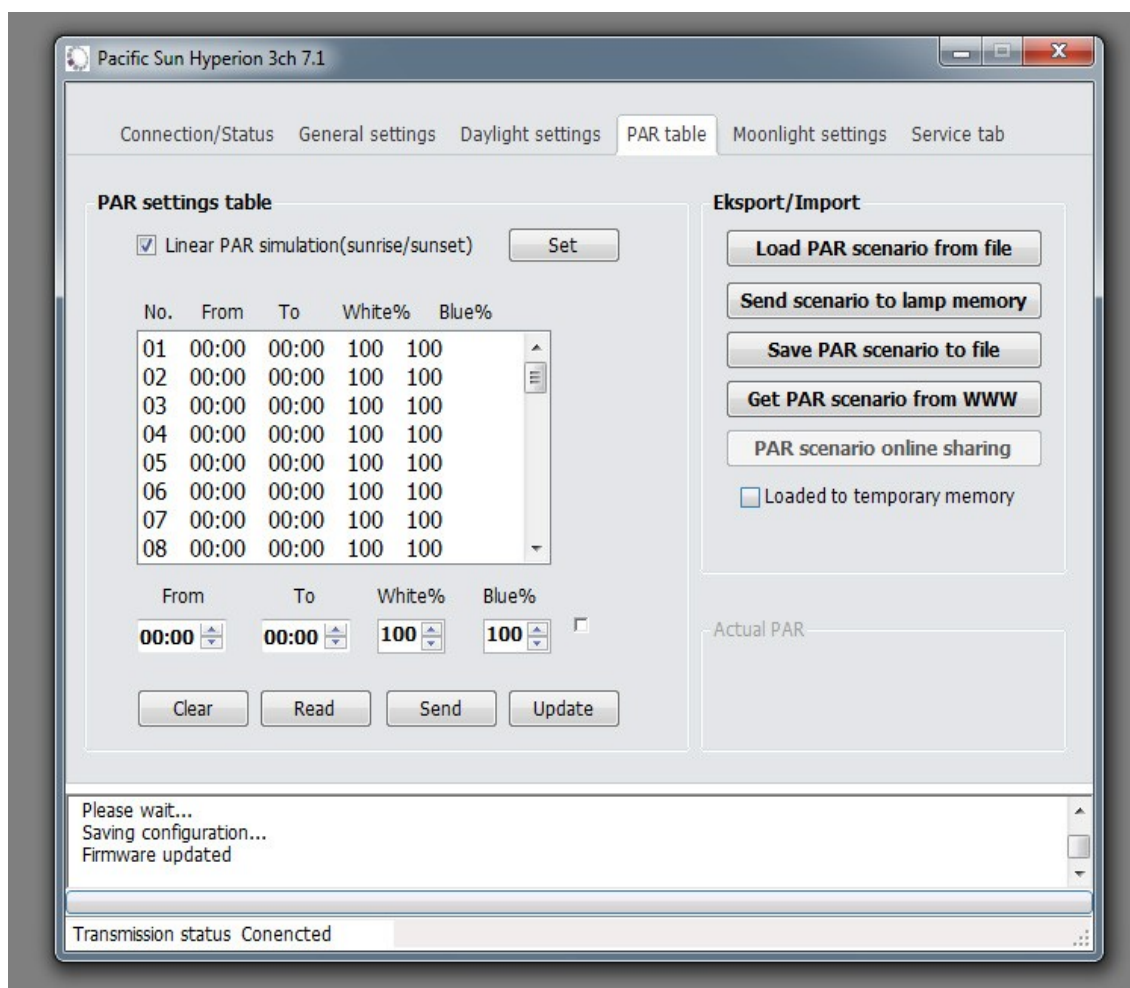
Seasons simulation – simulation of seasonal changes in light intensity. You can adjust your lamp’s brightness and colour temperature according to the chosen season. The lamp reaches its maximum brightness in dry season’s months. During wet season lamp’s brightness and colour temperature are gradually lowered.

Storms/lightning - the lamp will simulate storms and lightnings (with series of brief bright flashes) in randomly chosen days of wet season. If you select the Wave Sim option – the pumps will work irregularly, oscillating variably.

T5 lighting - This option is available only for lamps with T5 lighting. You can select the T5 lighting switch on/off time as well as their brightness (if your lamp supports option „dimnable“).

Colour temperature settings - Use the slide on the right side of the PAR settings table (displaying the actual spectrometer readings) to select the appropriate colour temperature light for your lamp (colour temperature values in Kelvin scale are approximate values).

1.3 PAR table



Advanced simulation of day light.

With **Linear PAR simulation** option switched on – your lamp will gradually switch from Basic light settings to more advanced simulations selected in the PAR table(without short flash between mode changing).

First, set the hours of sunset/sunrise in **Daylight tab**.

Adjusting the individual parameters in PAR table, you can influence the intensity and colour of light for multiple time-periods.

For example:

Select the duration of sunrise from 10.00 a.m. to 10.30 a.m. in the first row of the PAR table. Next, adjust the intensity of selected light colours e.g. White 6%, Blue 10%.

Click **Update** button and the table settings will be updated.

Next, select subsequent time-period in the second row of the PAR table, e.g. from 10.30 to 11.45 and adjust light intensity for this period e.g. White 10%, Blue 10% and click Update to save your settings.

This feature allows you to adjust colour temperature in various time-periods – you can simulate „warm” sunrise (adjusting only White colour) and „cold” sunset (adjusting Blue colour).

Export/Import

Load scenario from file – uploads a chosen lighting scenario file on your lamp’s temporary memory, e.g a scenario sent by other user.

Before uploading new lighting scenario to your lamp’s temporary memory, we recommend saving the previous scenario, using Save Scenario to file (in case you would like to return to the previous settings).

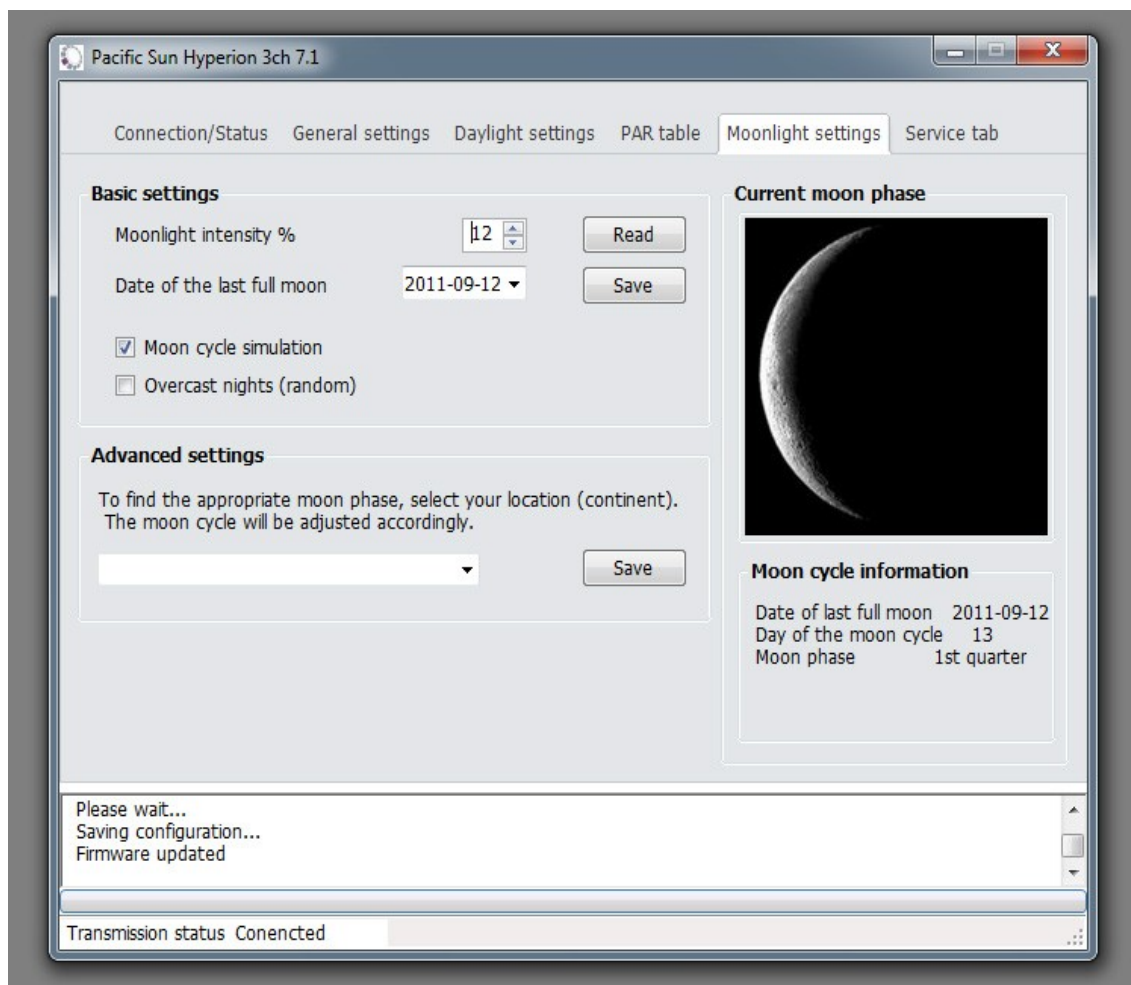
Send scenario to lamp memory – configures your lamp with the settings of your chosen scenario uploaded in your lamp’s temporary memory.

Save PARscenario to file – saves a chosen PAR scenario as a backup copy or to share it with other users.

Get PAR scenario from WWW – used to browse PAR scenarios database available on the Pacific Sun server.

PAR scenario online sharing – sending PAR scenarios from lamp’s memory to the Pacific Sun server.

1.4 Moonlight settings



To set night light and moonlight simulation.

Basic settings

Moonlight intensity % - to set moonlight intensity (with maximum intensity for full moon)

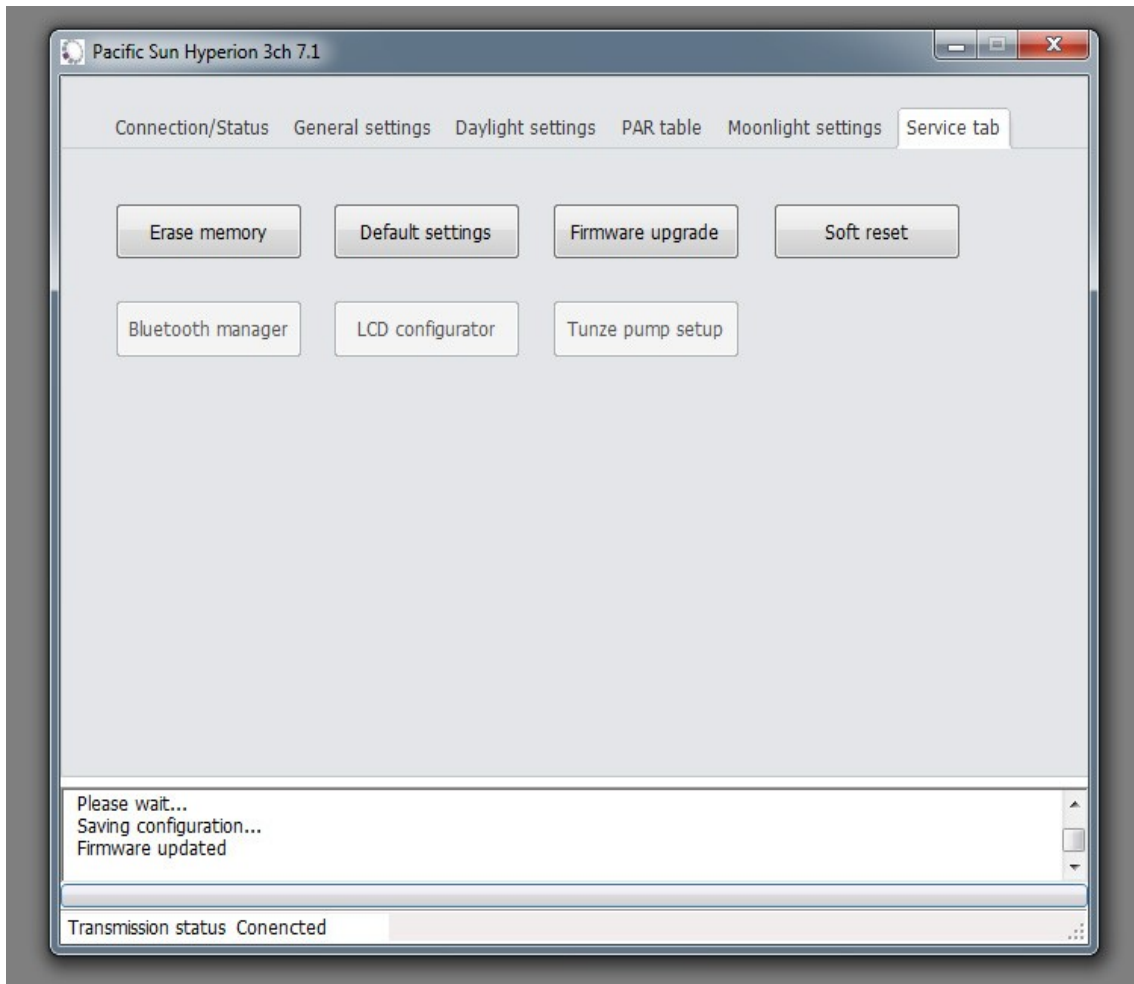
Date of the last full moon – to set the date of the last full moon. The preset date is 2011-09-12(date of the actual full moon)

Moon cycle simulation – to swich on/off moonlight simulation

With moonlight simulation switched off – you will get constant, invariable intensity selected via Moonlight intensity option.

With moonlight simulation switch on – light intensity will be gradually changing following the natural moon cycle (Current moon phase displays the current moon phase simulated by the lamp).

1.5 Service tab



Buttons description:

Erase memory – deletes the content of your lamp's memory including firmware – without the firmware your lamp will not work properly and you will have to upload the appropriate firmware. Dont use it without Pacific Sun Service confirmation!.

Default settings – restores preset default settings (power, sunrise/sunset time etc.)

Firmware upgrade – to update firmware

Soft reset – to safely reset firmware